

WHAT IS CLAIMED IS:

1. A tissue connector assembly comprising:

a fastener, where said fastener is self-closing and is movable between an open configuration and a closed configuration having a shape of two or more stitches;
and

at least one restraining device, where said at least one restraining device is coupled to said fastener for restraining said fastener towards said open configuration.

2. The tissue connector assembly of claim 1, wherein, when said at least one restraining device is uncoupled, said fastener moves from said open configuration towards said closed configuration.

3. The tissue connector assembly of claim 1, further comprising at least one needle releasably attached to said fastener.

4. The tissue connector assembly of claim 3, wherein at least a portion of said restraining device remains on said fastener when said needle is released from said fastener.

5. The tissue connector assembly of claim 1, wherein said fastener comprises a wire.

6. The tissue connector assembly of claim 5, wherein said wire has a generally circular cross-section.

7. The tissue connector assembly of claim 5 wherein said wire comprises shape memory material.

8. The tissue connector assembly of claim 1, wherein said at least one restraining device is a restraining device, wherein said fastener has a first end portion, a second end portion and an elongated member therebetween, said first end portion being coupled to said mechanical restraining device, said second end portion having a cross-sectional area greater than a cross-sectional area of said elongated member.

9. The tissue connector assembly of claim 8, further comprising a needle releasably attached to said fastener, wherein at least a portion of said restraining device remains on said fastener when said needle is released from said fastener.

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10. The tissue connector assembly of claim 1, wherein said at least one restraining device includes a first restraining device and a second restraining device, wherein said fastener has a first end portion, a second end portion and an elongated member therebetween, said first end portion being coupled to said first restraining device, and said second end portion being coupled to said second restraining device.

11. The tissue connector assembly of claim 10, further comprising a first needle releasably attached to said first end portion and a second needle releasably attached to said second end portion, wherein at least a portion of each of said at least one restraining device remains on said fastener when each of said needles is released from said fastener.

12. The tissue connector assembly of claim 1 wherein said fastener is in a relaxed state when in said closed configuration.

13. The tissue connector assembly of claim 1 wherein said restraining device comprises a coil surrounding at least a portion of said fastener.

14. The tissue connector assembly of claim 13 wherein said coil comprises a plurality of adjacent loops, said coil being compressible with said plurality of adjacent loops being spaced closer to one another along one side of said coil than along an opposite side of said coil.

15. The tissue connector assembly of claim 13 wherein each of said at least one restraining device includes a lock releasably engaging said coil, wherein engagement of said lock with said coil biases said fastener in said open configuration.

16. A tissue connector assembly comprising:

- a fastener, where said fastener is self-closing and is movable between an open configuration and a closed configuration having the shape of two or more stitches;
- a biasing member; and

- at least one restraining device, where said at least one restraining device is releasably coupled to said fastener and to said biasing member to provide a biasing force on said fastener to restrain said fastener towards said open configuration.

17. The tissue connector assembly of claim 16, wherein said fastener is self-closing, and wherein said at least one restraining device is releasably uncoupled from said fastener and said biasing member to actuate said self-closing fastener.

18. The tissue connector assembly of claim 16, further comprising a needle releasably attached to said fastener.

19. The tissue connector assembly of claim 16, wherein said fastener comprises a wire.

20. The tissue connector assembly of claim 19, wherein said wire has a generally circular cross-section.

21. The tissue connector assembly of claim 19 wherein said wire comprises shape memory material.

22. The tissue connector assembly of claim 1, wherein said at least one restraining device is a restraining device, wherein said fastener has a first end portion, a second end portion and an elongated member therebetween, said first end portion being coupled to said restraining device, said second end portion having a cross-sectional area greater than a cross-sectional area of said elongated member.

23. The tissue connector assembly of claim 1, wherein said at least one restraining device includes a first restraining device and a second restraining device, wherein said fastener has a first end portion, a second end portion and an elongated member therebetween, said first end portion being coupled to said first restraining device, and said second end portion being coupled to said second restraining device.

24. The tissue connector assembly of claim 1 wherein said fastener is in a relaxed state when in said closed configuration.

25. The tissue connector assembly of claim 1 wherein said biasing member comprises a coil surrounding at least a portion of said fastener.

26. The tissue connector assembly of claim 13 wherein each of said at least one restraining device includes a lock releasably engaging said coil, wherein engagement of said lock with said coil biases said fastener in said open configuration.

27. A method for connecting multiple portions of material, at least one of which comprises tissue, comprising:

threading a fastener, which is biased away from a closed configuration to an open configuration, through a predetermined number of stitches through said multiple portions of material, at least one of which comprises tissue;

mechanically maintaining said fastener in said open configuration while inserting said fastener through said materials; and
allowing said fastener to return to said closed configuration and secure a portion of said material therein with said predetermined stitches.

5 28. The method of claim 27 including maintaining said fastener in said open configuration with a locking device.

29. The method of claim 27 wherein said fastener is allowed to return to said closed configuration by disengaging said locking device.

10 30. The method of claim 29 wherein said fastener includes a needle coupled to said locking device and said locking device is disengaged by decoupling said needle from said locking device.

31. The method of claim 27 further comprising spring biasing said fastener to said open configuration.

15 32. The method of claim 27 wherein said fastener is inserted through a layer of tissue and a layer of graft material.